



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,390	07/11/2003	Kevin Lee Wasson	050377-0301666	2195
909	7590	08/01/2006	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			KRAUSE, JUSTIN MITCHELL	
P.O. BOX 10500			ART UNIT	PAPER NUMBER
MCLEAN, VA 22102			3682	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/617,390

Applicant(s)

WASSON ET AL.

Examiner

Justin Krause

Art Unit

3682

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/22/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12,17,18,42,44-49,59,60 and 62-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12,17,18,42,44-49, 59,60,62-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group 1 in the reply filed on May 22, 2006 is acknowledged. The traversal is on the ground(s) that no serious burden exists to search the entire application. This is not found persuasive because the examiner finds that it would be a serious burden to search all of the inventions in the application.

The requirement is still deemed proper and is therefore made FINAL.

***Information Disclosure Statement***

2. The information disclosure statement filed July 11, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 44-47, 49, 12, 17, 18, 42, 62, 64, 65 and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Kane et al (US Patent 5,971,614).

Kane discloses a hydrostatic bearing comprising:

- a bearing rail (1)

- a bearing carriage (2), including:

  - one or more bearing pads (35a, 34a, 33a, 32a, 31a, 30a, and 29a)

provided on surfaces opposite the bearing rail

  - a sealing structure (95) having contiguous side and end portions

  - a fluid return system including a plurality of drain grooves (32a, 32b, 70a, 36) in fluid communication with the one or more bearing pads and being positioned between one or more of the bearing pads and the sealing structure.

Regarding claim 45, one or more reservoirs (80a, 80b, 93a, 95a) are in fluid communication with the drain grooves.

Regarding, claim 46, one or more reservoirs comprise a plurality of reservoirs provided in end portions of the bearing carriage, including fluid inlet and outlet ports (18a, 18b, 40) in communication with a hydraulic power unit (100).

Regarding claim 47, the bearing rail is rectilinear.

Regarding claim 49, the bearing pads are disclosed as self compensating (col 4, line 68).

Regarding claim 12, the carriage further comprises a fluid inlet port (18a, 18b or 40) in fluid communication with one or more bearing pads and a fluid outlet port (19a, 19b) in fluid communication with the plurality of drain grooves.

Regarding claim 17 and 18, one or more fastening holes (10) provided on upper surfaces of the bearing carriage, a machine tool is attached thereon (col 7, line 7).

Regarding claim 42, the side portions of the sealing structure have a substantially upward facing u-shaped cross section.

Regarding claim 62, at least one of the drain grooves extend along the length of the bearing carriage. If it is applicant's intent to claim that the drain grooves extend along the entire length of the carriage, such an arrangement has been disclosed as prior art at the time of invention (col 9, line 25-28).

Regarding claims 64 and 65, multiple instances of pocket grooves enclosing a first planar area are shown within the drawings (figs 7,8,9,10, 12, 13, 14, 15, 22), and it has been disclosed as prior art at the time of invention to separate pockets with drains (col 4, lines 48-60), which would surround the pockets to separate them all. Between the drain groove and the pocket groove, a second planar area would be present in order to separate the drain groove and the pocket groove to prevent them from becoming a single groove.

Regarding claim 66, the plurality of drain grooves completely surrounds one or more of the bearing pads. Pad 10a, is completely surrounded by groove 9a, which is in fluid communication with drain groove 70a.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3682

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al in view of Teramachi (US Patent 4,692,039).

Kane discloses all of the claimed subject matter as described above but discloses the rail as generally 'X' shaped rather than T-shaped.

Teramachi teaches a T shaped rail for the purpose of providing a lightweight rail of sufficient rigidity and strength to bear the load being carried (Col 3, lines 11-15)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a T shaped rail as taught by Teramachi, the motivation would have been to provide a light weight rail that maintains the necessary strength and rigidity to carry the load being transmitted by the bearing.

7. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of Berger et al (US Patent 4,753,311).

Kane discloses all of the claimed subject matter as described above but does not disclose the seal to be a double lip seal.

Berger teaches a hydrostatic bearing device with a double lip seal (5) to provide a seal between a pressurized space and the atmosphere.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a double lip seal as taught by Berger to provide a seal between the pressurized space inside the bearing and the atmosphere.

8. Claims 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of Kafai (US Patent 6,428,210).

Kane discloses all of the claimed subject matter as described above, but does not disclose removably mounted keeper portions engaging the bearing rail.

Kafai teaches a bearing carriage comprising a central portion (44 and 46) and removably mounted keepers (48 and 50) to permit greater precision in bearing alignment and mating of relative sliding surfaces (Col 2, lines 60-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize removable keepers and a central portion as taught by Kafai, the motivation would have been providing greater precision in bearing alignment and mating of relative sliding surfaces.

Regarding claim 60, Kane discloses side sealing portions, which be incorporated into the removable keepers when combined with Kafai.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMR  
7/29/06

A handwritten signature in black ink, appearing to read 'Richard Ridley', is written in a cursive style.

RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER